



A Serious Supplemental

by Ltjg. Jeff Repass and HM3 Joseph Entrekin

On the morning of Dec. 20, 2000, a Marine Corps corporal panicked and began sinking during a 75-yard survival swim while wearing flight gear. This is a common occurrence at Aviation Survival Training Center Cherry Point, especially during Initial Water Survival Training class. One of our Navy swimmers brought the floundering corporal to poolside, where we asked him to get out of the pool and sit until the end of the training.

After a few minutes, the corporal said he felt nauseated. A corpsman checked him out, found his pulse and blood pressure to be excessively high, and referred him to the base hospital. A doctor diagnosed the corporal with tachycardia, which resulted from ingesting a dietary supplement called Hydroxycut (the corporal was a regular user).

An informal poll reported in the Jan. 18, 2001, issue of *The Windsock* (published here at MCAS Cherry Point) suggested that approximately half of all Marine Corps personnel use some kind of dietary supplement.

Hydroxycut is the brand name of a "performance enhancer" that contains ephedra (also called MaHuang) as one of its main ingredients. Supplements in this class are commonly called thermogenics, and they include such brand names as Ripped Fuel, GNC Herbal Rush, Diet-Phen, Metabolift, Met-Rx, and others. Thermogenics are meant to increase metabolism and burn fat.

Ephedra mimics the effects of hormones like epinephrine (adrenaline) and norepinephrine. The problem is that ephedra doesn't just stimulate fat-burning processes; it also affects the lungs, heart, blood vessels, glands, and the central nervous system, and the effects can be harmful. The FDA has received more than 1,200 complaints from ephedra users who report elevated blood pressure, heart palpitations, anxiety, insomnia, dehydration, and headache. In severe cases, users have suffered strokes and heart attacks. Some have died.

The active ingredient in ephedra is the chemical ephedrine, which can be converted into the street drug methamphetamine. Ephedrine sales have been banned in 16 states. Ephedrine is considered a banned substance by the International Olympic Committee, the United States Olympic Committee, and the National Collegiate Athletic Association.

Other diet and performance supplements pose problems, as well. According to the cover story in the Feb. 12, 2001, issue of *U.S. News & World Report*, "Ephedra supplements are raising the greatest worry in the medical community right now, but other natural remedies also concern scientists." Most popular among these other supplements are creatine, androstenedione, St. John's Wort, ginkgo, and ginseng.

People take creatine to increase energy output, but scientists have failed to demonstrate that creatine actually improves performance. They have found that it can cause diarrhea, muscle cramps, nausea, dizziness, and a variety of allergic reactions.

Hazard


Androstenedione, a natural alternative to anabolic steroids, claims to enhance strength and may increase testosterone levels. These claims have not been validated, but androstenedione does have potentially severe and permanent effects, even from short-term use. Side effects include acne, impotence, and tumors in the liver and other organs.

People take St. John's Wort as an antidepressant. It can cause prolonged bleeding and has many active components with unknown, adverse effects. Ginkgo is reputed to enhance memory and affects how your body secretes insulin. Ginseng can reduce blood sugar among diabetics, and nearly half of all ginseng product samples tested by ConsumerLab.com were found to contain high levels of toxic pesticides or lead.

NATOPS has guidelines for drug use by personnel in flight and support status. It defines "drugs" as "any chemical that, when taken into the body, causes a physiological response." NATOPS has a broad range of rules about drug use, ranging from the obvious prohibition of illicit drugs to guidance on daily use of tobacco and caffeine products. It doesn't specifically refer to dietary supplements, but dietary supplements are drugs.

BUMED addressed the issue of dietary supplements, flight personnel and NATOPS requirements in a Janu-

ary 1999 message, which said, in part, "BUMED has not approved the use of dietary supplements and herbal medicines in aircrew members. Flight surgeons should not approve these substances for anyone on flight status until more information is available."

Which brings us back to our local swimming pool. Water-survival training gives pilots and aircrew the knowledge and skills to survive in worst-case scenarios. When you ditch or eject, you have to stay calm and in control of your mind and body if you want to survive. The young corporal whom we pulled from the pool was neither of these things. We wondered if his loss of control and panic was due, at least in part, to the effects of his dietary supplement. This question deserves serious consideration. During survival training, instructors always can remove students if they are not faring well. During real life, instructors will be far away. 

¹NATOPS 3710.7 R 8.3.2.5

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